

Inventors: Wellington et al.
Appl. Ser. No.: 09/841,296
Atty. Dkt. No.: 5659-03600

Response To Office Action Mailed June 13, 2003

A. Pending Claims

Claims 4403-4428, and 5396-5400 are currently pending. Claim 4414 has been amended. Claim 4414 has been amended for clarification. Claims 5396-5400 are new.

B. Submission of Corrected Formal Drawings

In the Office Action mailed June 13, 2003, the Examiner indicated approval of the proposed drawing corrections filed on March 12, 2002. Applicant submits the corrected formal drawings approved by the Examiner (nine sheets, including FIGS. 23a, 23b, 32, 56, 57, 67, 68, 72, 73, 76, 81a, and 97).

C. The Claims Are Not Anticipated By Lindquist Pursuant To 35 U.S.C. § 102(b), or in the Alternative, Are Not Obvious Over Lindquist Pursuant To 35 U.S.C. § 103(a)

The Examiner rejected claims 4403-4428 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, obvious under 35 U.S.C. 103(a) over U.S. Patent No. 3,892,270 to Lindquist (hereinafter "Lindquist"). Applicant respectfully disagrees with these rejections.

The standard for "anticipation" is one of fairly strict identity. To anticipate a claim of a patent, a single prior source must contain all the claimed essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 U.S.P.Q.81, 91 (Fed. Cir. 1986); *In re Donahue*, 766 F.2d 531, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

In order to reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner et al.*, 379 F.2d 1011, 154 U.S.P.Q. 173, 177-178 (C.C.P.A. 1967). To establish a *prima facie* obviousness of a claimed invention, all the claim

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limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

The Examiner states:

The Lindquist reference discloses a product produced from an underground formation comprising hydrocarbons resulting from the thermal cracking of the hydrocarbons contained in the underground formation. The product appears to be the same or similar to the claimed product in that the product of Lindquist is produced in a similar way as compared to the claimed product. See col. 1, lines 40-64.

Lindquist states:

The present invention is directed to a method for converting petroleum within an underground formation into combustible product gas and bringing the so-formed product gas to the Earth's surface for subsequent distribution. (Lindquist, column 1, lines 40-44)

A mixture of oxidizing gas and steam is injected down the input well into the lateral connecting hole to react with petroleum in the formation by partial oxidation and by thermal cracking to form a product gas containing sufficient fractions of at least one of the following components, carbon monoxide, hydrogen and methane, to be combustible. The product gas is produced from the formation through the producing well. The produced product gas is analyzed for values of C₁ and C₂ hydrocarbons, carbon monoxide, carbon dioxide and oxygen. Based on a comparison of the values, the reactions in the formation between the mixture of oxidizing gas and steam and the petroleum are controlled to optimize the combustible fraction of the product gas. (Lindquist, column 1, lines 51-64)

The product gas is composed of various constituents including carbon monoxide, hydrogen, methane and C₁ to C₁₀ hydrocarbons, as well as carbon dioxide. (Lindquist, column 3, lines 46-49)

It is desirable to maximize the Btu value of the product gas. This is done by optimizing production of methane relative to carbon monoxide and hydrogen. (Lindquist, column 3, lines 52-54)

The product gas constituents may be optimized by controlling the ratio of oxidizing gas to steam. The ratio of oxidizing gas to steam controls the peak

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temperature and influences the relative rate of the water/gas-shift reaction.
(Lindquist, column 4, lines 3-7)

A typical gas composition consisted of 7 [volume] percent methane, 1.7 [volume] percent ethane, 12 [volume] percent carbon monoxide, 2 [volume] percent hydrogen, with the balance carbon dioxide. Condensate sample yield analysis is shown in Table II. (Lindquist, column 6, lines 57-61)

Claim 4403 describes a combination of features including: "oxygenated hydrocarbons" and "asphaltenes." Lindquist does not appear to teach or suggest at least the features of "oxygenated hydrocarbons" and "asphaltenes." There is no apparent support that the characteristics and conditions taught and suggested by the Lindquist patent would allow for the production of oxygenated hydrocarbons and asphaltenes. There is no teaching or suggestion that changing the conditions while using the introduction of oxygen and steam as taught and suggested by Lindquist could ever result in the features of claim 4403. The product claimed is an unexpected result. Applicant requests the removal of the anticipation and obviousness rejections of claim 4403 and the claims dependent thereon.

Claim 4418 describes a combination of features including: "oxygenated hydrocarbons" and "multi-ring aromatics." Lindquist does not appear to teach or suggest at least the features of "oxygenated hydrocarbons" and "multi-ring aromatics." There is no apparent support that the characteristics and conditions taught and suggested by the Lindquist patent would allow for the production of oxygenated hydrocarbons and multi-ring aromatics. There is no teaching or suggestion that changing the conditions while using the introduction of oxygen and steam as taught and suggested by Lindquist could ever result in the features of claim 4418. The product claimed is an unexpected result. Applicant requests the removal of the anticipation and obviousness rejections of claim 4418 and the claims dependent thereon.

New claim 5396 describes a combination of features, including "wherein the produced mixture comprises a hydrogen to carbon atomic ratio of greater than about 1.7." Support for the amendments may be found in the Specification at least on page 18, lines 24-26. Applicant submits that at least the above-quoted features of claims 4403 and 4418, in combination with the

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other features of the claim is not taught or suggested by Lindquist. Applicant respectfully requests allowance of claim 5396 and the claims dependent thereon.

D. Provisional Double Patenting Rejection

The Examiner provisionally rejected claims 4403-4428 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4369-4402 of copending U.S. Patent Application No. 09/841,240; claims 4429-4448 of copending U.S. Patent Application No. 09/841,636; claims 4188-4284 of copending U.S. Patent Application No. 09/841,310; and claims 4167-4183 and 4321-4342 of copending U.S. Patent Application No. 09/841,289.

Upon issuance of a patent for U.S. Patent Application No. 09/841,240; U.S. Patent Application No. 09/841,636; U.S. Patent Application No. 09/841,310; U.S. Patent Application No. 09/841,289; or the present application, or upon the applications being in condition for allowance but for the provisional double patenting rejection, Applicant will provide arguments for the inappropriateness of the double patenting rejection and/or provide a terminal disclaimer for the patent and/or patent applications.

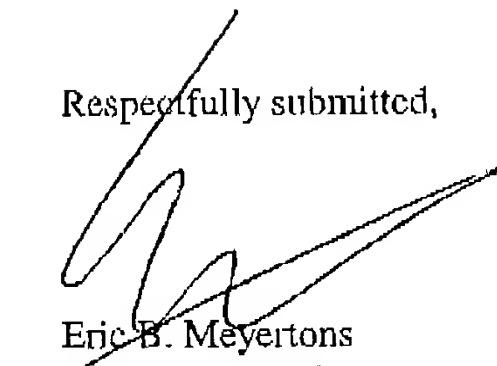
E. Additional Comments

Applicant submits that all claims are in condition for allowance. Favorable consideration is respectfully requested.

A fee authorization for excess claims fee is enclosed. If an extension of time is required, Applicant hereby requests the appropriate extension of time. If any fees are required, please charge those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5659-03600/IBM.

Inventors: Wellington et al.
Appl. Ser. No.: 09/841,296
Atty. Dkt. No.: 5659-03600

Respectfully submitted,



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Date: 3.11.04